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Multi Screen Remote Desktop in Windows (multi/dual screen rdp)

November 30th, 2009

I have a client that needed access to both his screens from his home office PC. He was aware of options like LogMeIn but was reluctant to pay for an app which seems to want to charge you a subscription.

After hunting around on the net for a couple of minutes the solution became apparent. You can use Windows Remote Desktop/RDP to connect multi monitors.

Save the RDP connection and then create a shortcut to:

mstsc.exe /span c:\1.rdp

1.rdp being the RDP file saved from the Remote Desktop Connection app

Posted by 2W1ETN under Computing with No Comments

Tags: dual monitor rdp, multi monitors, multiple monitors, multiscreen, multoscreen, rdp, remote desktop

Adding user for Linux Samba/SMD shares

November 28th, 2009

Samba uses **tdbsam** by default to manage SMB password, that's the password used to logon over Windows Networking.

Adding and managing users

In this example, I will add a user called damien. You can add as many users as you need in the same way, just replace the username tom with the desired username in the commands.

useradd damien -m -G users

Set a password for Damien in the Linux system user database. If the user Damien shall not be able to login to the Linux system, skip this step.

passwd damien

-> Enter the password for the new user

Now add the user to the Samba user database.

smbpasswd -a damien

-> Enter the password for the new user

Posted by 2W1ETN under Computing with 1 Comment

Getting Music on Hold working in Trixbox/Asterisk

November 28th, 2009

OK So I'm running **FreePBX 2.5.1** as comes with Trixbox. I go to get Music on Hold working and as with Open Source projects you need to get the little things like MOH working yourself.

If you have the same problem then you probably need to install **mpg123**.

From the Console logon as root and run the following:

```
rpm -Uhv
http://apt.sw.be/redhat/el5/en/x86_64/rpmforge/RPMS/rpmforge
release-0.3.6-1.el5.rf.x86_64.rpm
or if using a non 64bit system then:
```

right title

right text

Tags

1721 ADSL Amateur Radio

Asterisk **Cisco D-**

Star dual monitor rdp E93

E2820 GB3WE GB7CD GMSK Ham

Radio HTTP **Icom** Linux

Midstar mpg123 multi monitors

multiple monitors multiscreen

multoscreen New Adapater rdp

Reflector21 remote desktop

Router SDM Trixbox WAN

Skype Online Status

Call me! - Damien Jorgensen:
Offline

» Get Skype, call free!

```
rpm -Uhv
http://apt.sw.be/redhat/el5/en/i386/rpmforge/RPMS/rpmforge-
release-0.3.6-1.el5.rf.i386.rpm
yum install mpg123 sox
mkdir /var/lib/asterisk/mohmp3
chown asterisk:asterisk /var/lib/asterisk/mohmp3
chmod 755 /var/lib/asterisk/mohmp3
cp /var/lib/asterisk/moh/* /var/lib/asterisk/mohmp3/
```

Posted by 2W1ETN under Asterisk, Linux with 1 Comment
Tags: Asterisk, Linux, mpg123, Trixbox

Show ADSL Speed on Cisco Router

November 27th, 2009

Obtaining the ADSL Sync speed from your Cisco Router is quite easy, just pass the following command

```
show dsl interface atm0
```

You'll get something like the following back:

```
router#show dsl interface atm0
```

```
ATM0
```

```
Alcatel 20150 chipset information
```

	ATU-R (DS)	ATU-C (US)
Modem Status:	Showtime (DMTDSL_SHOWTIME)	
DSL Mode:	ITU G.992.1 (G.DMT) Annex A	
ITU STD NUM:	0x01	0x1
Vendor ID:	'ALCB'	'TSTC'
Vendor Specific:	0x0000	0x0000
Vendor Country:	0x00	0xB5
Capacity Used:	100%	62%
Noise Margin:	5.5 dB	19.0 dB
Output Power:	20.0 dBm	12.0 dBm
Attenuation:	49.0 dB	22.5 dB
Defect Status:	None	None
Last Fail Code:	None	
Selftest Result:	0x00	
Subfunction:	0x15	
Interrupts:	1333 (0 spurious)	

PHY Access Err: 0

Activations: 1

LED Status: ON

LED On Time: 100

LED Off Time: 100

Init FW: embedded

Operation FW: embedded

SW Version: 3.8131

FW Version: 0x1A04

	Interleave	Fast	Interleave
Speed (kbps):	5856	0	448
Cells:	15473	0	192329
Reed-Solomon EC:	7248	0	0
CRC Errors:	3	0	0
Header Errors:	2	0	0
Bit Errors:	0	0	
BER Valid sec:	0	0	
BER Invalid sec:	0	0	

LOM Monitoring : Disabled

DMT Bits Per Bin

00: 0 0 0 0 0 0 0 4 4 5 7 8 8 9 9 8

10: 8 8 8 8 8 7 7 7 6 6 5 5 4 3 0 0

20: 0 0 0 0 0 0 4 5 5 6 7 8 9 9 A A

30: A B B B C C C D D D D D D D D

40: 0 D D D D D D 2 D D D D D D

50: D D C D D C C C C D D D C D D

60: D C C C C C C C C C C C B 8 B

70: C C B C C C C C C C C C B B B

80: B B B A B B A A A A A A 8 A

90: A 9 9 9 9 9 9 8 7 8 8 8 8 7

A0: 7 5 7 7 7 5 7 8 8 8 8 8 7 7

B0: 7 7 7 7 7 7 7 7 7 7 7 7 7 5

C0: 5 5 5 5 5 4 4 4 4 4 2 2 0 0 0

D0: 0 0 0 0 0 0 2 2 2 3 3 2 4 4 4

E0: 4 4 4 4 4 4 4 4 4 4 3 3 3 3 3

F0: 3 3 3 2 2 0 0 0 0 0 0 0 0 0 0

DSL: Training log buffer capability is not enabled

Posted by 2W1ETN under Cisco, Computing with No Comments
Tags: 1721, ADSL, Cisco, Router, WAN

Checking your Interface/s Status on Cisco IOS Routers

November 26th, 2009

If you want to get a brief overview of your Interface/s status on Cisco IOS then use

sh ip int brief

For more detailed information then run

sh ip int

Posted by 2W1ETN under Computing with No Comments

Enabling HTTP Server on Cisco IOS Routers

November 26th, 2009

Enabling the HTTP server on Cisco Routers is easily done using the console port or via an SSH connection.

You might wonder why you'd want the HTTP server running; well you need it if you want to install SDM (Cisco Router and Security Device Manager)

To enable the web server logon or connect via terminal

Then type the command

enable

Then type

config

Press enter to config from the terminal when prompted

You should see a prompt like (Which is the config prompt):

Router(config)#

Enter the following commands

```
ip http server
ip http secure-server
ip http authentication local
```

If you intend to install SDM or want to be able to access the router from SSH then you need to add a user account as below:

```
Username sdm privilege 15 password 0 sdm
```

That will create a user with the username and password of SDM

If you haven't enabled SSH and or telnet do so using the following commands:

```
line vty 0 4
login local
transport input telnet ssh
```

Posted by 2W1ETN under Cisco, Computing with No Comments
Tags: 1721, Cisco, HTTP, SDM

Just removed your Outlook 2007 Profile?

October 12th, 2009

So you just removed your Outlook 2007 profile, you've created a new profile but outlook wont open?

You're getting an error similar to:

Cannot start Microsoft Office Outlook. Cannot Open the Outlook Window

Its simple enough to fix, just run the follow flag on Outlook from the command prompt or run:

```
Outlook.exe /resetnavpane
```

Posted by 2W1ETN under Computing with No Comments

Compiling FFMPEG for Microsoft Windows

August 11th, 2009

Installing FFMPEG from the source in window platform is easy as you do for other window application. Here is the complete instructions how to build FFMPEG in windows.

To install FFMPEG on windows you need to install third party **MinGW** and **MSys** library that is compatible with **GCC**. This library is required to build ffmpeg in windows and support shell to run commands.

Download **MinGW** and **MSys**

MinGW: [MinGW Direct download link](#)

MSys: [MSys Direct download link](#)

SF Link: [Sourceforge MinGW MSys Package Download Page](#)

FFMPEG: [FFMPEG](#)

```
MINGW32/c/ffmpeg-0.4.7/libavcodec
$ cd c:\ffmpeg-0.4.7

./configure --extra-cflags="-mno-cygwin -mms-bitfields" --extra-ldflags="-Wl,--add-stdcall-alias" --enable-simgp2 --enable-shared --disable-a52 --disable-p --disable-ffserver --disable-ffplay
./configure: sdl-config: command not found
./configure: sdl-config: command not found
Install prefix /usr/local
Source path /c:/ffmpeg-0.4.7
C compiler gcc
make make
CPU x86 (generic)
Big Endian no
MMX enabled yes
Vector Builtins yes
gprof enabled no
slib enabled no
apllase enabled no
vorbis enabled no
faad enabled no
faadbin enabled no
a52 support no
a52 dispened no
pp support no
shared pp no
Video hooking no
SDL support no
risky / patent encuabered codecs yes
optimize for size no
Sun andislib support no
AMR-NB float support no
AMR-NB fixed support no
Creating config.mak and config.h

$ cd libavcodec
sh: cd: libavcodec: No such file or directory

./configure --extra-cflags="-mno-cygwin -mms-bitfields" --extra-ldflags="-Wl,--add-stdcall-alias" --enable-mingw32 --enable-shared --disable-a52 --disable-pp --disable-ffserver --disable-ffplay

$ make
make -C libavcodec all
make[1]: Entering directory '/c:/ffmpeg-0.4.7/libavcodec'
gcc -mno-cygwin -mms-bitfields -Wall -g -DHAWE_AV_CONFIG_H -I... -D_FILE_OFFSET_B
ITS-64 -D_LARGEFILE_SOURCE -D_GNU_SOURCE -c -o common.o common.c
```

Building FFMPEG

It is time to install ffmpeg. Extract downloaded ffmpeg archive in c: folder. If you have not downloaded yet please download now then run MSys.bat file from C:\msys\1.0\ folder. This location will be depend on you MinGW and MSys installation. In the command prompt run the following commands:

```
$ cd c:/ffmpeg-0.4.7
```

```
$ ./configure --extra-cflags="-mno-cygwin -mms-bitfields" --extra-ldflags="-Wl,--add-stdcall-alias" --enable-mingw32 --enable-shared --disable-a52 --disable-pp --disable-ffserver --disable-ffplay
```

```
$ make
```

Posted by 2W1ETN under Computing with No Comments

Reflector 21

July 29th, 2009

After a day of getting a new box setup Reflector 21 was go and has been working flawlessly all day on the 29th July 2009 (OK the time was out, NTP installed and that's fixed).



GB7CD was the fat repeater connected to the new reflector, soon followed by the HotSpot based GB3WE.

Having GB3WE connected it seems quite clear that to a user connected via RF to GB7CD that users on GB2WE appear as though they were using any Icom repeater. Their call sign, and user message all get routed through, even in the Dplus log of GB7CD there is no noticeable difference.

I don't see how any objection could be based on little more than Myth that has prevented GB3WE and other node adapters being connected to the other UK Reflectors.

The MidStar D-Star repeaters are to start using port B on Ref21, where they also intend to make use of node adapter based repeaters, to complement their current Icom based one. ♦

I understand there has been a lot of interest in exactly where Reflector 21 is located and the kind of hardware and network connections used. Here is the low down, its located in London at a Blueconnex Data centre

The hardware is a Quad Core Xeon, 4GB of Ram, Mirrored disks The network connectivity is provided currently by a Duplex 100Mbps port, which has the capacity to be a 1Gbps port, but I've turned it down on the switch, as I doubt we need 1Gbps.

Internet Connectivity to most of the UK is via LINX which should provide a decent low hop count to ADSL lines which so many reflectors use. From other systems connected in different Datacentres around London, the average lag seems to be about 3ms, with about 10ms from Cardiff's GB7CD over ja.net ♦

By all means feel free to connect your node adapters to the reflector. If it doesn't work disconnect it. We wont ban you!

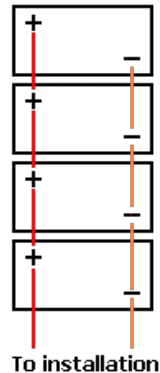
Interconnecting Batteries

July 5th, 2009

So I've decided I need more than one additional battery to power the computers and ham radio gear in my Range Rover. Question is just what is the best way to connect 3 leisure batteries together and charge them from the main alternator/battery.

Here is a diagram showing the traditional way of interconnecting 4 batteries to form one large bank. This is a method that we **still** see in many installations.

Method 1



Notice that the connections to the main installation are all taken from one end, i.e. from the end battery.

The interconnecting leads will have some resistance. It will be low, but it still exists, and at the level of charge and discharge currents we see in these installations, the resistance will be significant in that it will have a measurable effect.

Typically the batteries are linked together with 35mm cable in a good installation (often much smaller in a poor installation). 35mm copper cable has a resistance of around 0.0006 Ohms per metre so the 20cm length between each battery will have a resistance of 0.00012 Ohms.

This, admittedly, is close to nothing. But add onto this the 0.0002 Ohms for each connection interface (i.e. cable to crimp, crimp to battery post etc) and we find that the resistance between each battery post is around 0.0015 Ohms.

If we draw 100 amps from this battery bank we will effectively be drawing 25 amps from each battery. Or so we think.

In actual fact what we find is that more current is drawn from the bottom battery, with the current draw getting progressively less as we get towards the top of the diagram.

The effect is greater than would be expected.

Whilst this diagram looks simple, the calculation is incredibly difficult to do completely because the internal resistance of the batteries affects the outcome so much.

However look at where the load would be connected. It is clear that the power coming from the bottom battery only has to travel through the main connection leads. The power from the next battery up has to travel through the same main connection leads but in addition also has to travel through the 2 interconnecting leads to the next battery. The next battery up has to go through 4 sets of interconnecting leads. The top one has to go through 6 sets of interconnecting leads. So the top battery will be providing much less current than the bottom battery.

During charging exactly the same thing happens, the bottom battery gets charged with a higher current than the top battery.

The result is that the bottom battery is worked harder, discharged harder, charged harder. It fails earlier. The batteries are not being treated equally.

Now in all fairness, many people say "but the difference is negligible, the resistances are so small, so the effect will also be small".

The problem is that in very low resistance circuits (as we have here) **huge** differences in current can be produced by **tiny** variations in battery voltage. I'm not going to produce the calculations here because they really are quite horrific. I actually used a PC based simulator to produce these results because it is simply too time consuming to do them by hand.

Battery internal resistance = 0.02 Ohms
Interconnecting lead resistance = 0.0015 Ohms per link
Total load on batteries = 100 amps

The bottom battery provides 35.9 amps of this.

The next battery up provides 26.2 amps.

The next battery up provides 20.4 amps.

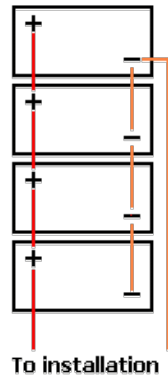
The top battery provides 17.8 amps.

So the bottom battery provides over twice the current of the top battery.

This is an enormous imbalance between the batteries. The bottom battery is being

worked over twice as hard as the top battery. The effects of this are rather complex and do not mean that the life of the bottom battery will be half that of the top battery, because as the bottom battery loses capacity quicker (due to it being worked harder) the other three batteries will start to take more of the load. But the net effect is that the battery bank, as a whole, ages much quicker than with proper balancing.

Method 2



All that has changed in this diagram is that the main feeds to the rest of the installation are now taken from diagonally opposite posts.

It is simple to achieve but the difference in the results are truly astounding for such a simple modification.

The connecting leads, in fact, everything else in the installation remains identical.

Also, it doesn't matter which lead (positive or negative) is moved. Whichever is easiest is the correct one to move.

The results of this modification, when compared to the original diagram are shown below. Only that one single connection has been moved.

After this simple modification, with the same 100 amp load....

The bottom battery provides 26.7 amps of this.

The next battery up provides 23.2 amps.

The next battery up provides 23.2 amps.

The top battery provides 26.7 amps.

This is quite clearly a massive improvement over the first method. The batteries are much closer to being correctly balanced. However they are still not perfectly balanced.

How far is it necessary to go to get the matching equal?

Well, the better the quality of the batteries, the more important it becomes. The lower the internal resistance of the batteries, the more important it is to get them properly balanced.

So that now leaves the question of whether or not there is a wiring method to perfectly balance the batteries.

Before getting to that, it should be pointed out that doing the calculation is not actually required in order to arrive at the ultimate interconnection method. I simply did them to show the magnitude of the problem.

In order to get a better balancing it is simply necessary to get the number of interconnecting links as close as equal between each battery and the final loads.

In the first example the power from the bottom battery passed through no interconnecting links. The top battery passed through 6 links.

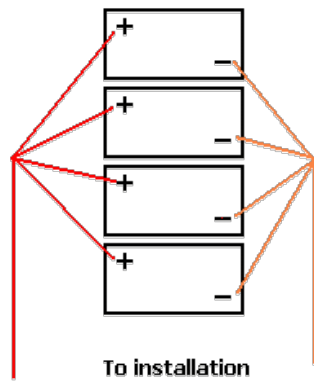
In the 2nd example (the much improved one), the power from the top and bottom battery both passed through a total of 3 links. That from the middle 2 batteries also both passed through 3 links which begs the question "why were they not therefore perfectly balanced?". The answer is that some of the links have to pass more total current and this therefore increases the voltage drop along their length.

And now we get to the correctly wired version where all the batteries are perfectly balanced.

Method 3

This looks more complicated.

It is actually quite simple to achieve but requires two extra interconnecting links and two terminal posts.



Note that it is important that all 4 links on each side are the same length otherwise one of the main benefits (that of equal resistance between each battery and the loads) is lost.

The difference in results between this and the 2nd example are much smaller than the differences between the 1st and 2nd (which are enormous) but with expensive batteries it might be worth the additional work. Most people (myself included) don't consider the expense and time to be worthwhile unless expensive batteries are being fitted or if the number of batteries exceeds 8.

This method isn't always so easy to install because of the required terminal posts. In some installations there is simply no room to fit these. So, thanks to a colleague, we can also present another wiring method that achieves perfect battery balancing.

Conclusion

I'll be opting for method two, as its simple to install, and with the three batteries I'm opting for the difference in amperage between batteries will be somewhat lower than as above. Once installed I'll take a few photos










Posted by 2W1ETN under Amateur Radio, Electronics with No Comments

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